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(CEINAC)

THE ECONOMIC DEVELOPMENT
ADMINISTRATION
AND
INDUSTRIAL POLICY
IN PUERTO RICO

VICENTE FELICIANO

CUADERNOS DE INVESTIGACION
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The Economic Development Administration
and Industrial Policy in Puerto Rico

Centro de Investigaciones Académicas
(CEINAC)
Universidad del Sagrado Corazón
1993

Por Vicente Feliciano
Fomento, Inc.

Dedication

This work is dedicated to the children of Teodoro Moscoso, the men and women who for half a century have worked at Fomento and have contributed so much to the well-being of all Puerto Ricans.

August 9, 1993

Puerto Rico is facing several various issues which resume our need to define a bilateral relationship that we sustain with the United States since 1898. On the verge of this relationship, the 936 Internal Revenue clause, is perhaps the main neuralgic element that defines this relationship nowadays.

The Academic Research Center (CEINAC) of University of the Sacred Heart is promoting this issue presenting this "Cuaderno de Investigación", Title: The Economic Development Administration and Industrial Policy in Puerto Rico. In this Cuaderno Prof. Vicente Feliciano makes an analysis of the importance of the discussion of this issue and makes the relationship towards the Puerto Rican Economic Development and the Fomento Strategy of Developing the Economy.

With the presentation of this singular study, we embrace the general discussion of 936 and invite the academic and general public to have a closer look of issue which regularly has been discussed from a more political standpoint instead of its economic terms.

César A. Hernández, Ph.D
Director of Academic Research Center
(CEINAC)

FOMENTO, Inc.
The Economic Development Administration and
Industrial Policy in Puerto Rico

| | |
|-------------------------------|----|
| Foreword | i |
| Note on the Author | ii |
| Marketing Puerto Rico | 1 |
| Fomento's Organization | 4 |
| Promotion | 6 |
| Pricing | 17 |
| Product | 27 |
| Conclusion | 42 |
| Appendix on Industrial Policy | 44 |
| Bibliography | 51 |

Note About the Author

Mr. Vicente (Chenti) Feliciano is a consultant with the firm "Estudios Técnicos" in Puerto Rico. Previously, he worked at the Economic Development Administration - Fomento. He first held the position of Deputy Director of the Caribbean Development Area, promoting the use of 936 Funds in the Caribbean and the twin plant concept. He was then named Coordinator of International Projects, promoting Asian and European investment into Puerto Rico. He also has work experience in the United States and Peru in the areas of trading and finance. Mr. Feliciano did his B.A. with a major in economics at Harvard University, where he graduated Cum Laude. He obtained his M.B.A. from IMD in Lausanne, Switzerland, where he was part of the Dean's List. His previous publication was "A Proposal for Competition in Telephone Services in Puerto Rico", published by the Center of Academic Research of the University of Sacred Heart in 1990.

Foreword

by Prof. William Riefkohl
Fomento's Deputy Administrator 1987-92

Surprisingly little has been written recently about Puerto Rico's industrial program and about the role of its development agency, the Economic Development Administration, or Fomento by its well known Spanish nickname. A rich and sustained experience which became a focal point of study and analysis in the past, and that resulted in the scholarly text "The Long Uphill Path" by David F. Ross, and shorter pieces such as H.C. Barton's "Puerto Rico's Industrial Development Program 1942-1960", has produced little critical writing during the past decade or two.

Apart from occasional, short newspaper articles, very personal points of view contained in letters to the editor, as in official and rather urbane reports and statistics put out by the agency, there is a vacuum of literature on the subject.

This is puzzling, for we are referring to a program which has been highlighted more than often as a truly innovative, successful and for reaching schemes in the world, despite its shortcomings. Puerto Rico is constantly compared to Ireland and Singapore as an example of positive thought translated to positive action. Independent evaluating companies have rated Puerto Rico as having the safest international business climate, as was the case with Syracuse-based Political Risk Services, which ranked the island in 1990 and 1991 as the most favorable environment for business in the world. The name Fomento conjures images of magical powers in the other development agencies of the greater Caribbean region.

Now comes Vicente Feliciano with this refreshing, updating and critical perspective, a work long overdue. It may become one of the basic documents in studying and analyzing Puerto Rico's development and the role of Fomento. It should.

Feliciano was able to obtain first-hand knowledge and experience during the years he worked at the agency. He was able to balance this experience with solid academic background and some international perspectives to match. And he was able to refocus his observations, facts and opinions from the perspective of his present responsibilities as an economic consultant. The result is an interesting, well written document from an innovative perspective.

Enough said, let the reader probe.

I Marketing Puerto Rico

The name Economic Development Administration (EDA/ Fomento) implies a sort of Department of Economics, since there is no Puerto Rico government instrumentality with a similar task. Some people outside Fomento see it as a sort of Ministry of International Trade and Industry, along the lines of the Japanese government. Fomento officers see the agency as a sales company.

In his presentation in 1992 to the in-coming administration's transition committee, Fomento's Administrator Alfredo Salazar stated: "Fomento is a promoting agency. It identifies, visits, convinces, and if the investor is from abroad brings him to Puerto Rico. ... A salesman is as good as the product he sells and Fomento has the best product in the world- Puerto Rico and its people."¹

Fomento feels it has a product to sell, Puerto Rico, clients to satisfy, mainly industrial investors, a holding company to which it reports, the central government, and shareholders who demand a return on their investment, the people of Puerto Rico.

In this line of thought, Puerto Rico does not compete in manufacturing or the export of services with Singapore, Ireland, or North Carolina. It competes in offering services to investors who are free to choose among many competing locations. "Countries have found themselves bidding against one another for the same global jobs. Who successfully lures the jobs becomes a matter of state and local pride, as well as employment".² "Governments must make their countries an attractive enough location for the global companies to want to do business and invest and pay taxes there."³

¹ Salazar, Alfredo "Presentation to the Transition Committee" December 1992, pg. 30

² Reich, Robert, Work of Nations, Vintage Books 1992, pg. 297

³ Ohmae, Keinichi Borderless World, HarperBusiness 1990, Pg. 195

Main Incentives Offered by Puerto Rico/ Fomento

- A 4.5% maximum income tax rate
- A 2.0% to 2.5% effective toll gate tax rate
- Section 936 - No taxes when repatriating to the US
- Physical proximity to the US market
- US possession, where the currency is the US dollar and many US laws apply
- Available industrial buildings from PRIDCO, starting at \$1.75 per square foot per year
- A highly skilled labor force with wage rates significantly below U.S. wage rates
- Access to 936 funds, which are one to two percentage points below U.S. market rates
- Duty free, quota free access to the U.S. market; products manufactured in Puerto Rico carry the "Made in USA" label
- A pro-business government

The more mobile the investment, the stiffer the competition is going to be. Thus, Jamaica taxes heavily the bauxite mining companies, while at the same time has free trade zones with no taxes for apparel companies. And mobility in manufacturing and export of services is an asymmetrical issue for companies and host countries; companies can move, countries cannot. Discussing the potential impact of the elimination of the tax incentives of Section 936, Mr. Joseph Riccardo, pharmaceutical analyst at Bear Sterns & Co. stated, "It's a problem for Puerto Rico in the long term, not for the pharmaceutical companies. They'll just bolt the place. Ireland and Singapore would love to have them."⁴

Fomento is a very effective organization at selling Puerto Rico as an investment site. The resulting investments provide direct employment to 150 thousand Puerto Ricans and indirect employment to many others. However, this very emphasis in selling led to a lack of attention to the the product itself, Puerto Rico and its international competitiveness. Our manufacturing base is still very dependent on

⁴ Hemlock, Doreen "Analysts: Drug Firms Will Bolt", San Juan Star, February 26, 1993, pg. B-1

Section 936, a law that is anything but stable. Thus, success at investment promotion has not resulted in a solid industrial base.

A comparison can be made between companies that grow behind tariff protection and the 936 corporations. Throughout the world, when tariff protection has been eliminated, many companies have been forced to close. During a Puerto Rico Senate investigation on the impact of Section 936 in February 1993, Mr. Redgy Coucke, General Manager-Upjohn, said that the company was constantly evaluating its different international sites and that "At Upjohn we're certain that without Section 936 Puerto Rico won't pass the test."⁵

This research paper uses a business framework to analyze the strengths and weaknesses of Fomento, the agency that leads Puerto Rico's industrial policy. By probing into Fomento's corporate culture, the paper provides an insight to the logic behind some of the decisions that shaped the economy of Puerto Rico. Particular attention is given to tax issues since they are at the core of Fomento's strategy. The next section discusses Fomento's organization. Subsequent sections follow the marketing framework of promotion, price, and product. Distribution channels are not discussed because they are not applicable to investment promotion.

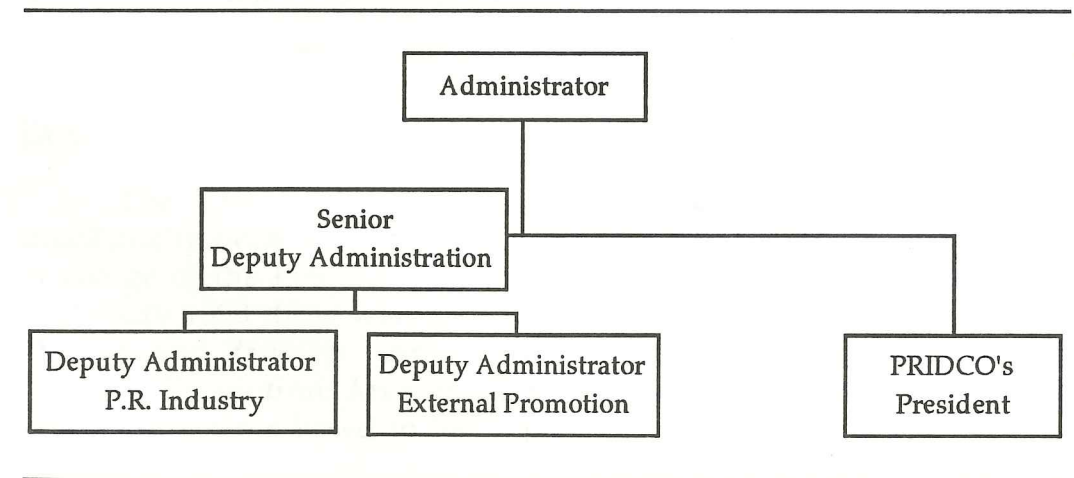
⁵ "Puerto Rico Called Uncompetitive Without 936" San Juan Star, Feb. 28, 1993, pg. 6

II Fomento's Organization

There is no question that Fomento is an elite within the government of Puerto Rico. The Fomento Administrator is one of the few central government officers allowed to fly first class. Many private sector corporate headquarters pale compared to Fomento's main building. And EDA has a slightly higher salary scale than most of the central government⁶.

Fomento's most important resource is the legacy of the past and the sense of mission that it inspires. Many of Fomento's 800 employees feel they are doing something important for their country. It is an act of faith within Fomento that the organization, initially led by Mr. Teodoro Moscoso, was instrumental in lifting the country out of poverty in the late 1940's and bringing the subsequent prosperity. This sense of mission is a precious commodity. It also implies a heavy burden of the past bearing upon Fomento because, as in many successful companies, "the past strategy becomes ingrained in organizational routines. Information that would modify or challenge it is not sought or filtered out. The past strategy takes an aura of invincibility and becomes rooted in company culture. Suggesting change is tantamount to disloyalty."⁷

Fomento's Organization



Fomento clients are divided in two groups, Puerto Rico investors and external investors. Joint ventures are considered Puerto

⁶ Even this salary scale is often too low to attract top talent from the private sector. Salaries for lawyers in 1993 ranged between \$1,158 and \$2,395. So Fomento frequently resorts to consulting contracts as a way to by-pass the salary constrains.
⁷ Porter, Michael The Competitive Advantage of Nations, The Free Press 1990, pg.52

Rican investment if at least 50% of the capital is local. Fomento has a Deputy Administrator for each group of clients.

The President of PRIDCO, who reports to the Fomento Administrator, oversees 23.1 million square feet of industrial real estate⁸. The job assigned to PRIDCO in Fomento's strategy is to provide readily available industrial space to investors at below market prices, to the extent that its equity and asset base permit.



⁸ Puerto Rico Industrial Development Company, Annual Report 1992, pg. 27

III Promotion

Fomento is a marketing-driven organization. The Governor of Puerto Rico names the Fomento Administrator with the mission to create jobs. He must deliver, so most of his time is dedicated to sales. This could be working with the Fomento staff to improve its efficiency at promotion, a task performed very well by Mr. Alfredo Salazar, or hitting the road acting as the top promoter, a task at which Mr. Antonio J. Colorado excelled.

The most widely used indicators at Fomento are plants and jobs promoted. A plant promotion indicates a commitment by a firm to establish or significantly expand facilities in Puerto Rico. Jobs promoted is the commitment by the company regarding employment after 18 months of the commencement of operations. The thrust is obvious, plant promotions are cases closed and jobs promoted are the sales amount. Fomento promoters (salesmen) are paid incentives (commissions) based on the number of plants and jobs promoted.

For the last 35 years, Fomento has used the local tax incentives coupled with Federal tax incentives as its main selling point.⁹ Mr. David Ross, an economist at Fomento, wrote in 1966: "Only those who actually conduct negotiations with the industrialists seem to sense that this is qualitatively different from the other 'incentives' and that it is the sine qua non of the program."¹⁰

External Promotion

The Deputy Administrator for External Promotions has traditionally been based in New York, close to his clients, and directly in charge of the Fomento promotional offices outside Puerto Rico. As of January 1993 these were in New York, Chicago, Los Angeles, Tokyo, Madrid, and Brussels. Another group that may report to him is the External Promotion Area in San Juan, which is the sales unit for external investors based in San Juan.

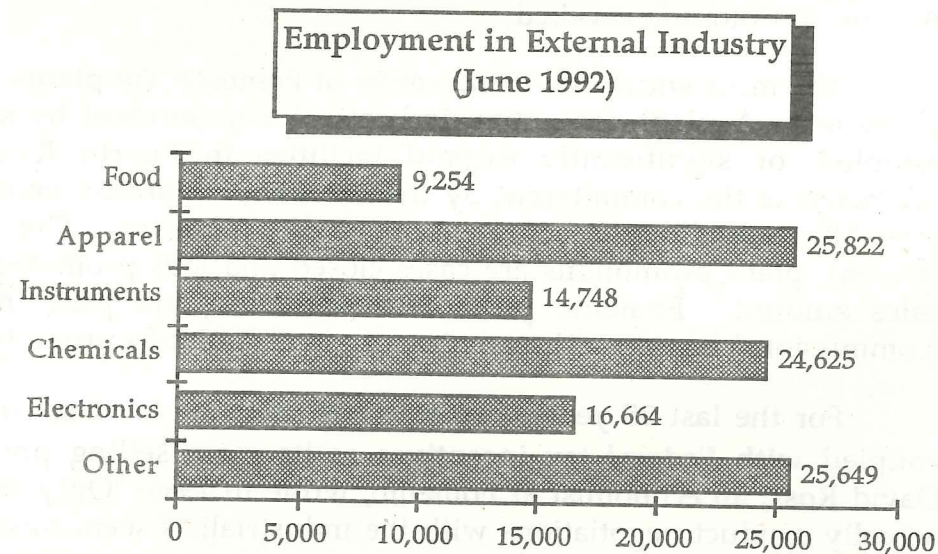
While Fomento-New York is predominantly Puerto Rican, Fomento has proved itself open minded in recruiting and offering professional opportunities for non-Puerto Ricans. The result is that some non-Puerto Ricans have made a career at Fomento and risen

⁹ "Operation Bootstrap" Forbes, August 17, 1992, pg. 50,55
Salazar, Alfredo, Op. Cit., pg. 16-17

¹⁰ Maldonado, Alex "The Indispensable Tool" San Juan Star, March 14, 1993, pg. 46

through the ranks. This is in line with the corporate culture of Fomento, which sees itself as closer to the private than to the public sector. In fact, one of Fomento's most successful promoters ever was Mr. Paul Switz, who never learned Spanish.

As of June 1992 there were 116,762 employees at external plants promoted by Fomento.¹¹ These accounted for 79% of the jobs promoted by Fomento at the time.



DAEP's clients often have made the decision of setting up a new facility and his job is to convince them to establish it in Puerto Rico. Competition between different jurisdictions to attract these investments is keen.

Speaking to Fomento's Senior Deputy Administrator in 1991, the Deputy Director of the Economic Development Board of Singapore mentioned that he had recently visited the Abbott facilities in Puerto Rico¹², which he described as impressive. He then mentioned that Singapore was happy with their results in attracting foreign investment, particularly in electronics. However, they were interested in increasing the number of pharmaceuticals in their country.¹³

¹¹ Economic Development Administration, Area of Economic Research, March 1993

¹² At the time, Abbott was deciding on the location for a \$200 million investment, and the Puerto Rico facility was visited by officers from Singapore, Ireland, and the United States; the company decided to expand the Puerto Rico operations.

¹³ Interview with Mr. William Riefkohl, 1991

The promotional offices are judged on the basis of jobs promoted. This puts pressure on the promoters for results. The reorganization of the US efforts started in 1991 led to the closure of Fomento offices in Boston, Atlanta, and Dallas.

The efforts to attract foreign investment are concentrated in the United States. There are several reasons for this. The first one is that one of the most important marketing tools which Fomento has used since the inception of "Operation Bootstrap" almost half a century ago has been tax incentives, local and Federal. US companies are most likely to benefit from the Federal tax incentives. The second reason is that often multinationals prefer to invest close to their home base and Puerto Rico is physically close to the United States. Also, many US companies feel comfortable investing in a US possession where the currency is the US dollar and most US laws apply. A final reason is historic, when Fomento started its efforts of industrial promotion in the late 1940s, Europe was in ruins and Japan was under military occupation.

As the economies of Europe and Japan recovered, they started to make investments in the United States. "As recently as 1977, foreign-owned firms accounted for only about 5 percent of American manufacturing (as manufacturing is formally classified in government statistics) and 3 percent of American manufacturing employment; by 1990, foreigners owned more than 13 percent of America's manufacturing assets (including half of all American based companies involved in consumer electronics) and employed more than 8 percent of America's manufacturing workers comprising some 3 million Americans."¹⁴

True to form, Fomento realized the potential of international investment early on. It was one of the pioneers in Japan, opening its office in the early 1970s; many US states and independent countries followed years later. For cultural considerations, Fomento's office in Europe was in Spain. The coming of Europe's Project 1992 changed the dynamics of the market. Fomento established its main promotion office in Brussels, seat of the European Community.

The first step in the promotion process is to get a so called lead. This could come from press advertising, direct mailing, seminars, cold calls by the promoters, or from companies already established in Puerto Rico.

¹⁴ Reich, Robert Op. Cit., pg. 128

Fomento advertises in publications like Fortune, BusinessWeek, and the Financial Times. Direct mailings sometimes include an article, once it was a Puerto Rican orchid, to make it special and memorable. Besides, the Public Relations Area makes an effort to obtain "good press", such as the article "Operation Bootstrap" of August 1992 in Fortune magazine that stated how Puerto Rico's development program worked remarkably well.¹⁵

The promoters organize dozens of seminars each year to which they invite potential investors. The format of the seminars is to bring private sector businessmen to give presentations on taxes, infrastructure, financing, and most important, a manufacturer to discuss his experience in Puerto Rico. This private sector participation enhances the credibility of the message. The seminar invitations and the cold calls usually follow a hit list prepared by Fomento's Targeting Area.

A special kind of seminar is the one known within Fomento as Boardroom Meeting. This is a seminar for only one company, often with operations already in Puerto Rico, in which Fomento's objective is to promote an expansion or a new plant from a company division different from the one already established. The meeting is attended by many of the company's senior managers and Fomento's Administrator.

The information from the companies already established in Puerto Rico relates often to their own suppliers or clients, which they believe would benefit from setting up operations in Puerto Rico. This is one of the best sources of leads for External Promotion.

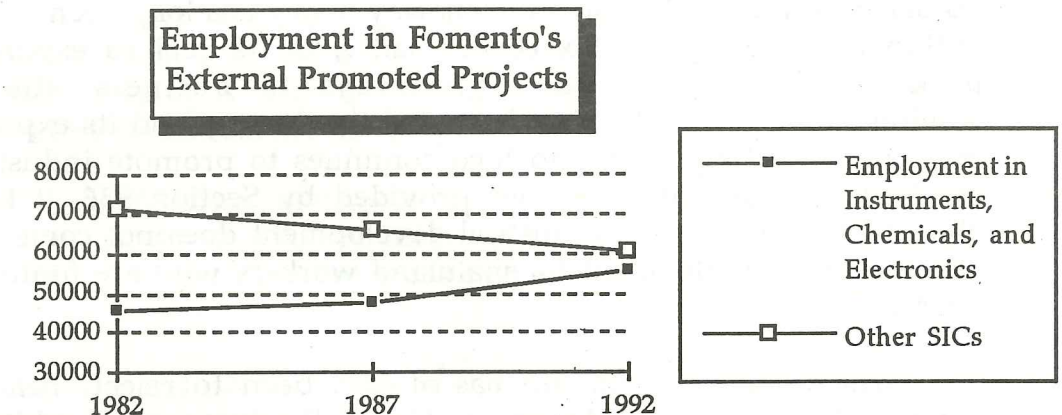
A typical case is Wilkata, part of the Mebane Packaging Group. They started operations in Puerto Rico in 1988 to supply some of their United States clients who had plants in Puerto Rico. In 1993 they were supplying clients like Procter & Gamble, Whitehall-Robins, and Dupont-Merck. Their expansion, announced in 1993, "underlies a trend by pharmaceutical industry suppliers, such as bottle makers, label printers and box manufacturers to be closer to their pharmaceutical industry clients."¹⁶

The Targeting Area has developed sophisticated criteria to support the marketing efforts. Companies are classified on the basis of industrial sector, sales growth, profit margins, among others. This

¹⁵ "Operation Bootstrap" *Forbes*, August 17, 1992, pg. 50,55

¹⁶ Hemlock, Doreen "Wilkata Expands in Puerto Rico" *San Juan Star*, January 16, 1993, pg. 17

permits Fomento-New York to determine which companies are likely to expand within the next year, and focus on those that could benefit from making this expansion in Puerto Rico. These are increasingly in the areas of chemicals (SIC 28), electronics (SIC 36), and instruments (SIC 38).



Source: EDA, Office of Economic Studies

Promoters work on the leads to produce prospects. These are the companies that have shown a strong interest in Puerto Rico. At this stage the prospect is encouraged to visit Puerto Rico, where an officer from San Juan's External Promotion Area welcomes him. The San Juan officer tries to advance the sale by introducing the investor to lawyers and bankers, showing him potential sites for his investment, arranging visits to existing operations, etc. For these government officials, it is quite common to work after hours and during weekends when potential investors are visiting. Close cooperation is established between the promoter outside Puerto Rico and the one in the island.

Most leads produce no investment. The time frame between a lead and the final investment decision is often a year or more. Therefore, the DAEP is always under pressure to keep leads and prospects flowing through the system.

For more than forty years Fomento was able to carry its efforts without getting a strong reaction from the U.S. labor movement. The case of American Home Products changed the scenario. The Oil, Chemical and Atomic Workers Union argued that the company had shut down a factory at Elkhart, Indiana and transferred the operation to Puerto Rico in search of a better tax environment. Law in Puerto Rico prohibits granting tax exemption in those cases and requires certification by the companies receiving the tax exemption that the

investment in Puerto Rico will not adversely affect employment of US workers. American Home Products denied any wrongdoing and the case was settled out of court in 1992 with \$24 million in compensation to the workers.

The union's point of view is stated in a February 1993 article co-signed by Robert Wages, president of the union: "Because of the special tax status of Puerto Rico an anti-runaway policy has long been reflected within the Puerto Rico tax code... Sadly, in its zeal to expand the package of promotion and giveaways to business, the past administration in Puerto Rico discarded this history and its expression in policy... As long as Puerto Rico continues to promote industry on the basis of the huge subsidies provided by Section 936, it has an obligation to insure that industrial development does not come at the expense of unemployment for mainland workers who are footing the bill." 17

The policy of Fomento has always been to reject "runaway" plants. But since the American Home Products case, additional attention is given to the employment situation in the US of the petitioning firm before granting a tax exemption. This cautious attitude is necessary, but has the side effect of increasing red tape and restraining marketing efforts in cases where there is doubt about the consequences to US employees of the investment in Puerto Rico. If unionization level in the manufacturing sector in Puerto Rico were higher, perhaps the US union movement would be more ambivalent regarding the issue; but unionization in Puerto Rico's manufacturing sector is approximately 6%. Challenges by United States unions to the investment plans of firms with operations in California (Sunstrand-aerospace products), Tennessee (Acme Boots-leather footwear) and other states are evidence that the issue will continue to hamper Fomento's promotional efforts.

The concern regarding "runaway" plants is not shared to the same extent by Puerto Rico's competitors. Plant re-locations are common in a world where there is keen competition for investment. An interesting case is the row between France and Great Britain because Hoover, a maker of household appliances, is closing a plant in Dijon in order to move to Glasgow. 18 The difference with American Home Products is that Hoover's British investment is not dependent on a French tax law.

17 Wages, Cross, LeRoy "Case for Addressing the 'Runaways' Issue" San Juan Star, Feb.14, 1993, pg. 31

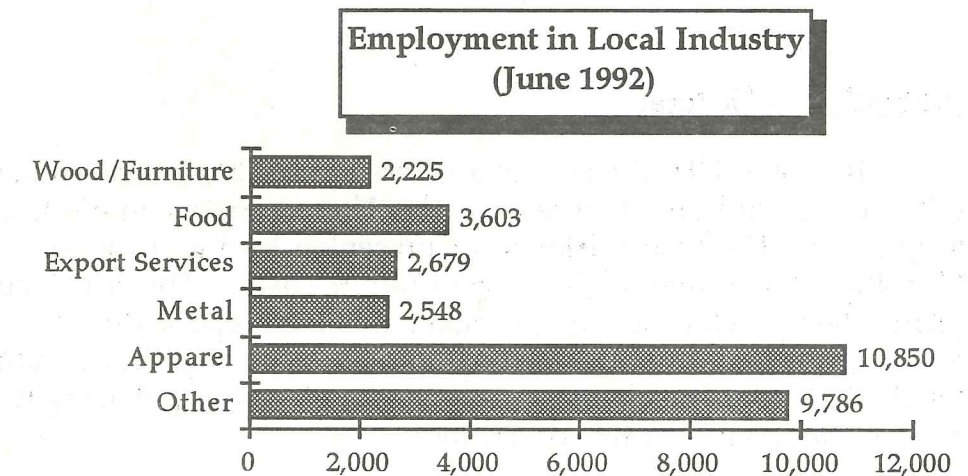
18 "Labour Pains", Economist, Feb. 6, 1993, pg. 71

Local Promotions

The job of the Deputy Administrator for Puerto Rican Industry is completely different from the Deputy Administrator for External Promotions. He spends a smaller portion of his time on promotion. He is directly in charge or closely related to programs that cater to the industrialists who are already established. The main question for the local investor is usually not where should he set up the plant, but whether he should set up the plant at all.

The Area of Local Promotions reports to the Deputy Administrator for Puerto Rican Industry. This is his sales group. In addition, there are other areas that report to the DAPRI. The Design Council provides services of industrial and product design (including packaging) mainly for the apparel, footwear, food processing, and furniture industries. The Marketing Area promotes in the Puerto Rican market the sale of goods manufactured in Puerto Rico, while Fomexport does the same at the international level. A multinational such as Sara Lee (Hanes and Playtex) could theoretically use these services. In fact, the services are mostly used by local industry. One example is that the Puerto Rico Apparel Association, a group of mostly local producers, has its offices inside the facilities of the Design Council.

There were 31,691 employees in local operations promoted by Fomento as of June 1992, which accounted for 21% of the Fomento promoted jobs.¹⁹



19 Economic Development Administration, Area of Economic Research, March 1993

Puerto Rican industrialists are concentrated in low technology sectors like apparel, furniture, and food processing. This in itself is no negative condition since Italy has achieved a high level of income on the basis of some low-tech industries such as textiles, apparel, furniture and footwear²⁰. And indeed, some local manufacturers are large, solid companies; however, these are the exception. Most of Puerto Rico's local industry has little of an international profile and the supporting and related services around them tend to be weak. The local industry caters mainly to the local market, sometimes supplying the US and foreign owned companies.

A law favoring local producers in government contracts is important for the survival of many furniture and food processing enterprises. A substantial part of the local apparel industry is in the "cut, make, and trim" business; that is, getting the cloth from the client and sewing the piece according to the client's specifications. In this commodity business, cash grants and subsidized rents are critical. The Economic Development Bank was established to help finance high risk projects like the ones that come to the Local Industry Area. Strong initial support to the local manufacturing sector aided the start up of Mova, Puerto Rico's first major local pharmaceutical. It also resulted in a large percentage of loan write-offs and subsequent restraint.

While the DAPRI leads a complex program of support for the local investor, the marketing program is relatively straightforward. Local Industry promoters rely on walk-ins and the grapevine for leads. Then, they work them into prospects and promotions. There are a total of 8 promoters in Local Industry, as opposed to 8 in External Promotions in San Juan and 13 in External Promotions Overseas.

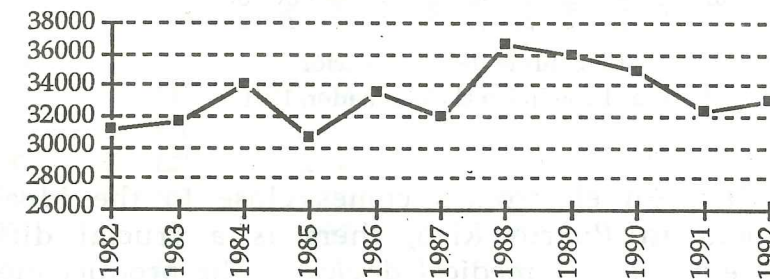
Promotions - General

In the 1950's Puerto Rico offered three main advantages: low labor costs, unlimited access to the United States market, and tax exemption. The major drawbacks presented by Puerto Rico were lack of skilled labor and high transportation costs. The ideal customer profile had a relatively simple labor intensive operation, in a market sector protected by U.S. tariffs/ quotas, a strong brand name that resulted in good profit margins, and a high value per weight. Many apparel companies fit this description.

²⁰ Porter, Michael Op. Cit., pg. 49-52

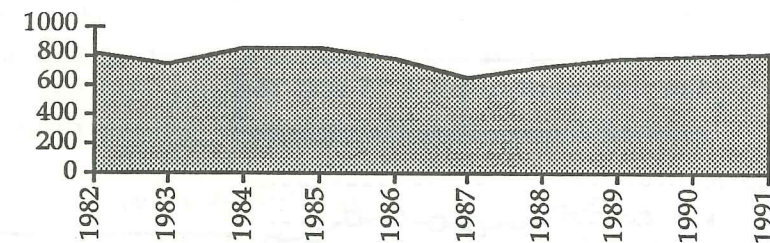
As salaries in Puerto Rico increased and restrictions to international trade diminished, the competitiveness of Puerto Rico in the traditional sectors declined. Shipments of apparel from Puerto Rico to the U.S. market stagnated. However, employment held up during the period and it is still Puerto Rico's largest employer in the manufacturing sector.

Employment in Apparel (SIC 23)



Source: Junta de Planificación
Informe Económico al Gobernador, 1991

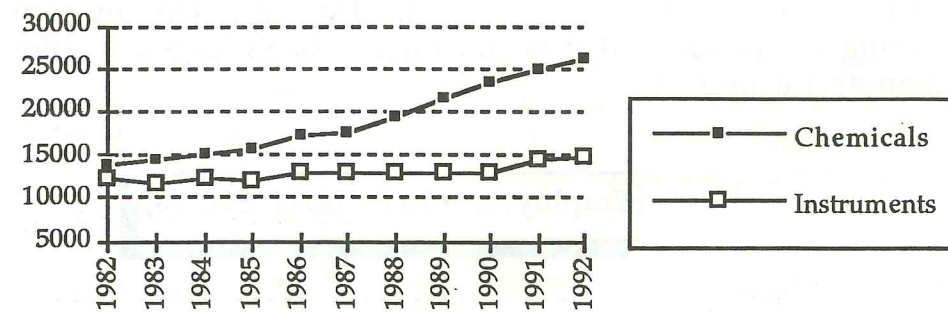
**Exports of Apparel and Textiles
(millions of dollars)**



Source: Junta de Planificación
Informe Económico al Gobernador, 1991

By the 1990's Puerto Rico's main advantages were skilled labor at moderate costs and tax incentives. The major drawback relative to less developed countries were high labor costs. The major drawbacks compared to developed countries included problems with the infrastructure for waste disposal, expensive electricity and transportation, and government bureaucracy. The ideal customer profile had a relatively sophisticated operation, not energy intensive, with a high value per weight, and good profit margins. Pharmaceuticals and medical devices fit this description.

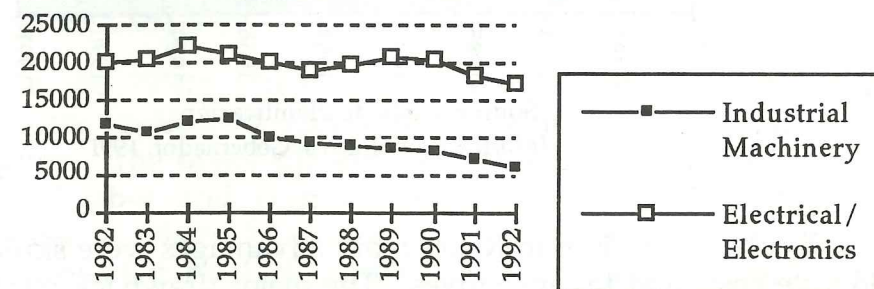
Employment in SICs 28 and 38



Source: Junta de Planificación
Informe Económico al Gobernador, 1991

Although electronics comes close to the ideal profile for investment in Puerto Rico, there is a crucial difference with pharmaceuticals and medical devices. The product life cycle of the latter are longer, there is less uncertainty regarding profit margins, and therefore a good tax environment is critical. In the case of electronics, profit margins can collapse from one year to the next. To maintain low production costs is more important than in pharmaceuticals, and therefore there is less tolerance for the drawbacks presented by Puerto Rico. Employment in the electrical/electronics sector (SIC 36) declined somewhat in the period 1982-92, while in the industrial machinery sector (SIC 35), which includes computers, it more than halved.

Employment in SICs 35 and 36



Source: Junta de Planificación
Informe Económico al Gobernador, 1991

The number of jobs in manufacturing went from 135,635 in June 1982 to 148,453 in June 1992²¹, which is not a particularly large increase. However, behind those numbers is a constant attrition of companies that close down for a variety of reasons. The extent of the success of Fomento at promoting investment can be better judged by how it has been able to more than offset this closures.

Plant Openings and Closures

| Year | Plant Jan.-Dec. | Plant Openings | Employment at Opening | Plant Closings | Employment at Closing | Net Employment |
|--------------|-----------------|----------------|-----------------------|----------------|-----------------------|----------------|
| 1982 | | 95 | 1,478 | 113 | 2,067 | -589 |
| 1983 | | 106 | 1,816 | 89 | 996 | 820 |
| 1984 | | 130 | 2,366 | 105 | 1,731 | 635 |
| 1985 | | 131 | 2,354 | 122 | 2,729 | -375 |
| 1986 | | 121 | 2,269 | 82 | 1,074 | 1,195 |
| 1987 | | 123 | 2,020 | 71 | 2,459 | -439 |
| 1988 | | 142 | 3,226 | 82 | 1,609 | 1,617 |
| 1989 | | 139 | 2,612 | 99 | 2,216 | 396 |
| 1990 | | 134 | 1,770 | 140 | 2,932 | -1,162 |
| 1991 | | 79 | 1,143 | 95 | 1,830 | -687 |
| 1992 | | 90 | 1,333 | 83 | 1,363 | -30 |
| Total | | 1,290 | 22,387 | 1,081 | 21,006 | 1,381 |

Source: Economic Development Administration, Office of Economic Studies

Job promotion is pursued relentlessly. These are the jobs which companies commit to create 18 months following the start up of operations. For the Fomento Administrator down to the promoters, this is the key measure of success. However, it might not be the best. It does not take into account if the jobs promoted are actually created, if they are high paying jobs, if they are in an area of high technology, if the company will pursue research, nor how much it will pay in taxes. Moreover, it pays too little attention to improving the competitive position of the companies already established in the country.

"What you measure and how you measure it have a powerful, often invisible influence on what you think and do... if you get a close look at a company's accounting system, for example, you ought to be able to guess with fair accuracy how its managers will behave."²² The measure of job promotions had an excellent effect on stimulating the promotional efforts; it also contributed to take management attention away from the areas of pricing and product.

²¹ Idem

²² Ohmae, Keinichi Op. Cit., pg. 60

IV Pricing

Contrary to some products which carry one price tag, calculating the cost of operating in a country is similar to estimating the cost of dining at a restaurant, it depends on which items of the menu you consume the most. It is worth considering six cost elements: electricity, maritime freight, water, labor, rent, and taxes. Fomento has little influence over the first four, but this does not make them less important.

Electricity

Industrial electricity in Puerto Rico is expensive. Electricity costs in Puerto Rico should be higher than in the United States because the island cannot be part of a larger electricity network. Therefore, it must maintain extra capacity on reserve to accommodate problems related to the shutdown of one of its generating plants. But this explains only part of the problem. Hawaii is a group of islands with a population of less than a third of Puerto Rico and yet has lower electricity costs.

The labor practices negotiated between Puerto Rico Electric and Power Authority and the union are extremely restrictive. Net electricity production per utility worker in 1989 in Puerto Rico was 1.3 million KwHr., while in the United States it ranged between 4.34 and 6.20 million KwHr.²³ In addition, oil is the source of almost all the electricity generated in Puerto Rico, which makes the country vulnerable to changes in its price.

The result is that industrial electricity costs in Puerto Rico average higher than those in any US state. Total electricity costs in Puerto Rico in 1990 were 152 percent of the US average; but since Puerto Rico chooses to subsidize residential consumption, the residential rates were 112 percent of the US average while the industrial rates were 183 percent of the US average.²⁴

Freight

Puerto Rico is subject to the provisions of the US maritime legislation, which states that its cargo movement to and from US ports must be in ships manufactured in the US, registered in the US and with a US crew. This is a burdensome restriction. The cost of insurance and freight as a percentage of import value has always been higher for Puerto Rico than for the United States. This in spite of the

²³ Stewart, John Puerto Rico's Electric Power Infrastructure, March 1992, pg.11A

²⁴ Idem, pg. 6

fact that most US trade is either trans-Pacific or trans-Atlantic while most Puerto Rico trade is with the nearby US mainland. The result is that Puerto Rico is placed at a disadvantage when competing in low value per weight products, in which transportation costs are an important consideration.

The size of the gap was only 1% during the late 1970's. In 1987 the figures were approximately 8% for Puerto Rico and 4.5% for the United States.²⁵ One explanation could be that the government-owned shipping company, Navieras, did not run an efficient operation while maintaining the largest market share. It therefore acted as a price leader in an oligopoly market.

It is interesting to notice that Puerto Rico leveraged its geographical position with good infrastructure and skilled labor to become a Caribbean hub for air transportation and passenger cruise ships, challenging the dominance of Miami in these two areas where there is no restrictive US legislation. A similar development has not occurred in cargo shipping, where San Juan service as trans-shipment point to other Caribbean ports is very limited.

Water

The Acqueduct and Sewer Authority (ASA) provides services related to water in Puerto Rico. A study by the British firm Severn-Trent Industries reported water loss to theft and inefficiency at 39% of production and recommended a reduction of 34% of the work force at ASA.²⁶ This inefficiency is passed on to the consumer in the form of higher prices.

Water treatment plants managed by ASA have deteriorated, leading to difficulties in treating industrial waste and problems with the Federal Environmental Protection Agency. A typical response is SmithKline's, which had to build its own \$4 million water treatment plant and spends \$3 million a year to operate it.²⁷ From the point of view of the company this ties up capital, is expensive, and distracts management from its main task of manufacturing products for the market.

Wages

²⁵ Stewart, John Puerto Rico's Economic Policy and Performance, undated

²⁶ "Comptroller Supports Cutting ASA's Payroll" San Juan Star, Feb. 26, 1993, pg. 2

²⁷ Hemlock, Doreen "Small Business Seen Threatened" San Juan Star, April 5, 1993, pg. B7

Wages in Puerto Rico are substantially higher than some competitors, but significantly below those in developed countries. Adjustments must be made when analyzing a specific industry. For example, wages in manufacturing in Puerto Rico were roughly 55% of the US average in 1989, but in the pharmaceutical industry they were 70% of the US average.

Puerto Rico-United States Hourly Wage Comparisons (1989)

| Industry | Puerto Rico | United States | PR/US |
|-------------------------|-------------|---------------|-------|
| Pharmaceuticals | \$8.76 | \$12.47 | 70% |
| Instruments | \$6.13 | \$10.17 | 60% |
| Personal Care | \$7.47 | \$9.34 | 80% |
| Apparel | \$4.08 | \$6.34 | 64% |
| Electronics/ Electrical | \$7.47 | \$9.34 | 80% |

Source: Fomento's Highlights of Industries, 1990

An interesting exercise would be to adjust for a productivity factor, but this analysis is difficult because the tax exemptions in Puerto Rico probably lead to statistics that overstate the value added of Puerto Rican workers. Dr. John Stewart, senior economist at Fomento, did some analysis comparing Puerto Rico with some middle income countries. The results showed Puerto Rican labor to be reasonably competitive but far from a bargain.

Manufacturing Labor Cost Comparisons Middle Income Countries, 1987

| Country | GNP/Capita 1987 | Est. Hourly Labor Costs in Mfg. 1987 | Competitiveness Index* | GNP Growth Rate 1965-87 |
|-------------|--------------------|---|---------------------------|----------------------------|
| Hong Kong | 8,070 | \$2.55 | 0.24 | 6.2% |
| Singapore | 7,940 | \$3.87 | 0.37 | 7.2% |
| Ireland | 6,120 | \$11.12 | 1.37 | 2.0% |
| Spain | 6,010 | \$8.69 | 1.09 | 2.3% |
| Puerto Rico | 5,530 | \$7.33 | 1.00 | 2.4% |
| Greece | 4,020 | \$6.39 | 1.20 | 3.1% |
| Portugal | 2,830 | \$2.54 | 0.68 | 3.2% |
| South Korea | 2,690 | \$1.86 | 0.52 | 6.4% |

* Ratio of Labor Costs to GNP per Capita relative to Puerto Rico's (Puerto Rico =1.0)

Source: John Stewart, Puerto Rico's Economic Policy and Performance, undated

The most important government intervention in terms of wage levels in Puerto Rico is the minimum wage. Because of the political relationship with the US, this is set by the Federal government at the

US level, even though the productivity in the US is much higher than in Puerto Rico. This is reflected in the fact that minimum wage was 64% of average wages in Puerto Rico, while only 38% in the US in 1990.

The policy of a high minimum wage probably improves income distribution, increases unemployment, and decreases labor participation; it also prices Puerto Rico out of many labor intensive industries (See Appendix on Industrial Policy).

Puerto Rico developed a Work-Fare program ("Programa Pan y Trabajo"), that subsidizes wages in order to promote the employment of people on welfare. It also offers some cash grants for employment creation and for training. However, the magnitude of these programs, and therefore their impact, is minor.

Rent

PRIDCO rents out industrial space at an average of \$2.12 per square foot per year²⁸, with lower prices for buildings in the central highlands and higher for buildings close to the capital. PRIDCO buildings are usually general purpose structures. If the production process requires a specialized facility, PRIDCO could build it but the investor would have to pay market prices. Developmental and social considerations play an important role regarding the location of industrial space, which is to be expected of a company whose mission is to improve the well being of Puerto Ricans. Often the location of the buildings available is not responsive to the needs and best interests of the client.

There are implicit subsidies in PRIDCO's pricing. The result is little competition from the private sector. When it does occur, private sector prices tend to be \$3 to \$5 above PRIDCO's level. The private sector selling point is space availability close to the San Juan area.

Taxes

"Well-run American and European companies ... make decisions about ownership and finance not only to hedge their currency exposure but to take advantage of significant differences in tax rates and treatment of income."²⁹ It is a cost which is important to high margin industries, while less so to industries where competition has forced margins down; and it is irrelevant for companies experiencing losses.

²⁸ Puerto Rico Industrial Development Company, Op. Cit., pg. 27

²⁹ Ohmae, Keinich Op. Cit., pg. 154

Puerto Rico's tax incentives provide that manufacturing and export service companies pay a maximum 4.5% income tax. Taxes on dividend repatriation (toll gate tax) is set at 10%, but as a result of re-investment incentives the actual amount paid is close to 2.0%. Thus, the effective tax rate is approximately 6.5%. Local companies pay a tax on dividends equivalent to the toll gate tax.

Other jurisdictions offer tax incentives to attract investment. Singapore offers a full tax holiday to what it considers pioneer industries for a period of ten years³⁰. The Republic of Ireland offers a 10% tax rate with generous provisions for depreciation of machinery and start-up costs³¹.

What makes Puerto Rico particularly attractive in terms of taxes is Section 936, which permits repatriation of the profits free from Federal taxes. It is the equivalent of a tax sparing agreement, while it is the policy of the US Government not to sign tax sparing agreements. Other locations are subject to Section 901 of the Internal Revenue Code, under which profits from foreign operations of US companies are taxed at the full US corporate tax rate and then a credit for taxes paid abroad is allowed.

However, the Federal tax law of corporations operating outside the US is quite complex. It includes current taxation for Subpart F income such as interests on bank deposits and financial instruments even when these profits are not repatriated to the US. Many double taxation agreements waive or limit taxes when repatriating income to the US. And a company could avoid US taxation by various mechanisms of re-investment outside the US. A study by James Hines and Glen Hubbard "examined data collected from tax returns for 1984 on financial flows from 12,041 foreign subsidiaries to their 453 US parent corporations. They found that, although on average dividend repatriation composed 39% of subsidiaries' after-foreign-tax profits, most subsidiaries paid no dividends at all. The pattern of repatriation was related to the tax cost, so that in net terms the US government collected little revenue on foreign income of US multinationals."³²

The Federal Treasury calculated the tax savings of 936 corporations, the vast majority of which operate in Puerto Rico. The

³⁰ Marino, John "What the Competition is Offering", San Juan Star, March 8, 1993, pg. B7

³¹ Ireland Industrial Development Authority, Guide to Taxes and Tax Reliefs in Ireland, pg. 3-5

³² Razin and Slemrod, Taxation in the Global Economy, The University of Chicago Press, 1990, pg. 5

US Treasury estimate considers a credit for the income taxes paid to Puerto Rico. Receipts include a total of \$1.5 billion in interest income, part of which is just the result of the toll gate tax forcing companies to deposit part of their profits in Puerto Rico's financial system; pharmaceutical companies alone had \$464 million in interest income. Also, since 1989 the US Treasury tightened the regulations, restricting the use of a method called cost sharing to calculate income of 936 corporations. Finally, Fomento has always questioned the basis of the calculations because Treasury assumes that in the event of the elimination of Section 936 the companies would remain in Puerto Rico and maintain the current dividend repatriation patterns. Even taking into account these caveats, the tax savings are significant.

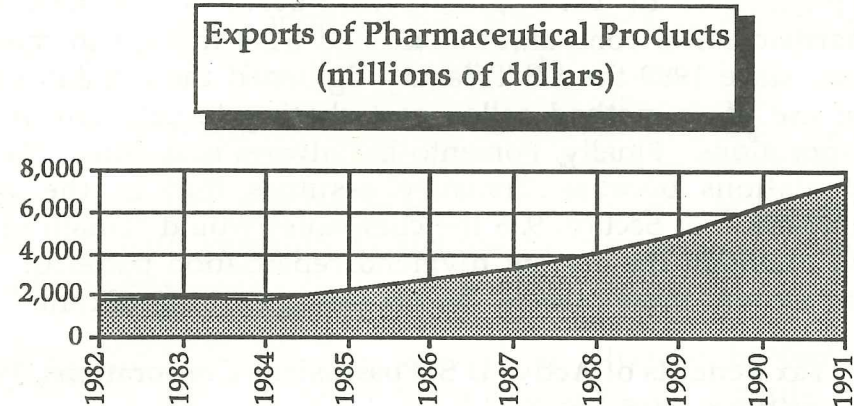
Tax Benefits of Active U.S. Possessions Corporations, 1989
(millions of dollars)

| Industry Group | Profits | Tax Savings Estimate | Est. Tax Savings/ Worker's Compensation |
|----------------------------|--------------|----------------------|---|
| Pharmaceuticals | 4,140 | 1,191 | 217% |
| Other Chemicals | 449 | 135 | 217% |
| Electrical and Electronics | 1,160 | 321 | 82% |
| Instruments | 589 | 171 | 98% |
| Food | 949 | 274 | 120% |
| Apparel | 138 | 40 | 18% |
| Other Sectors | 1,058 | 323 | 60% |
| Total | 8,483 | 2,455 | 107% |

Source: Draft Summaries of the Administration's Revenue Proposals
Department of Treasury, February 1993

We can conclude that Puerto Rico is an attractive location for companies with high profit margins, particularly pharmaceuticals. Once Puerto Rico's labor proved that it could handle the complexities of the production process, its low tax cost provided the edge to attract investment. As the competitiveness of Puerto Rico in the sector improved, generic drug producers such as Mylan Laboratories, for

whom tax incentives are less important than for producers of patented products, started operations in Puerto Rico.



Source: Junta de Planificación
Informe Económico al Gobernador, 1991

When a company finds an unusually high demand for its products, it often takes advantage of the situation to raise prices. In this case, Puerto Rico could have gotten more out of the 936 companies if it had levied higher taxes on them. Initially, only the toll gate tax was charged. The imposition of the maximum 4.5% income tax rate was controversial in the late 1970s; by 1985 it represented 31% of corporate taxes and its elimination was all but impossible.

Taxes Paid By Fomento Promoted Companies

| Year | Income Tax Foreign Corp. | Toll Gate Tax | Income Tax Local Corp. | Total Taxes Corp. with Tax Incentives | Total P.R. Corp. Taxes | Taxes Corp. with Tax Incentives/PR Corp. Taxes |
|------|--------------------------|---------------|------------------------|---------------------------------------|------------------------|--|
| 1982 | 71 | 85 | | 156 | 452 | 34.5% |
| 1983 | 70 | 121 | | 191 | 534 | 35.8% |
| 1984 | 115 | 162 | | 277 | 581 | 47.7% |
| 1985 | 166 | 108 | 14 | 288 | 605 | 47.6% |
| 1986 | 147 | 88 | 18 | 253 | 745 | 34.0% |
| 1987 | 253 | 120 | 28 | 401 | 923 | 43.4% |
| 1988 | 238 | 120 | 22 | 380 | 942 | 40.3% |
| 1989 | 293 | 119 | 29 | 441 | 957 | 46.1% |

Source: Departamento de Hacienda; Junta de Planificación, Informe al Gobernador 1991

From the point of view of Fomento's shareholders, the people of Puerto Rico, determining the optimum tax rate required a careful

assessment of the benefits of higher tax collections against the jobs and investment forgone. But Fomento did not see its mission as maximizing value for its shareholders, but as maximizing sales (jobs promoted). If promoted companies paid more taxes, the Secretary of "Hacienda" would get the credit. In fact, it was difficult for Fomento to obtain information about how much taxes its promoted companies paid. And for the Fomento Administrator, judged on the basis of jobs promoted, any increase in taxes was a bad idea; as any increase in price is a bad idea from the point of view of a company's salesmen.

Part of the problem was not due to Fomento but to a government organization in which there was no Department of the Economy or similar agency. During the 1950's Fomento was very powerful and under the strong leadership of Teodoro Moscoso played the role of Department of Industry, Tourism, Ports, and Economy. Later on, tourism and ports were separated from Fomento as two independent public corporations. The expansion of the service sector and the increasing complexities of the government sector diluted Fomento's power. By the 1980's Fomento was still extremely important, but had lost the clout to control the direction of the economy. Meanwhile, no government instrumentality was created to oversee the economy as a whole.

The result was that the pricing decisions were taken out of the context of industrial policy. In 1978 a pro-statehood governor saw a tax on Section 936 corporations as a way of bringing Puerto Rico's tax system closer to the American tax code. The zero tax rate was eliminated and a tax schedule was established that in theory increased the effective tax rate depending on the number of years that the company had in Puerto Rico. In practice, the companies renegotiated their tax exemption decrees, maintaining a maximum 4.5% income tax and approximately 2% tax on repatriations (known as the toll gate tax).

The elections of 1984 brought a pro-Commonwealth administration to power. By this time the taxes on 936 corporations had become an important source of revenue to the central government. A new Tax Incentive Law was approved that established de jure the practice of a 4.5% maximum tax rate and provided concessions regarding toll gate taxes for new investment. Fomento was very involved in the pricing process but again focused on employment creation, not a broader perspective.

The thesis of this process was that an effective tax rate of approximately 6.5% would attract high-tech companies with high profit margins to Puerto Rico, such as pharmaceuticals and medical instruments. The anti-thesis was that success in attracting these

companies would be perceived by the US Treasury as lost income and bring increasing pressure on Puerto Rico's pricing strategy. Since Section 936 is not an international treaty but a US law, it is susceptible to these pressures. To this we must add that many people favoring statehood for Puerto Rico see Section 936 as an obstacle to their aspirations and favor its eventual phase out.

The United States has been steadily limiting the benefits of Section 936, particularly those related to intangible income which is the income attributed to either patents or trademarks. In order to split this intangible income between the 936 corporation in Puerto Rico and its parent company in the United States, the Tax Equity and Fiscal Responsibility Act of 1982 required companies to choose between a method known as cost sharing and another called profit split. In 1986 regulations were enacted that significantly restricted the option of cost sharing. The option of profit split requires the company to split 50-50 the profits obtained by the Puerto Rico operation. Although unconnected to the Section 936 issue, the reduction of the top corporate rate in the United States from 50% to 34% also had the effect of reducing the attractiveness of Section 936.

Like a salesman brushing aside concerns about the client's credit risk, Fomento pushed onwards with its strategy. The idea was that Section 936 could be defended through lobbying in Washington. The arguments for Section 936 included that it underpinned Puerto Rico's economy and therefore allowed Puerto Ricans, who are U.S. citizens, to escape poverty; the economy of Puerto Rico imported \$10.7 billion of US products in fiscal year 1991³³; profits from the 936 corporations were channeled through Puerto Rico's financial system to advance development and democracy in the Caribbean; and finally, if the economy of Puerto Rico collapsed massive migration would occur and as US citizens, Puerto Ricans could not be turned back at the border.

By the early 1990's some people deeply involved in the Section 936 environment were concerned about the situation. Dr. John Stewart, Fomento's Senior Economist, expressed the view that the concessions on toll gate tax could no longer sustain a cost/benefit analysis from Puerto Rico's stand point. He advocated to hold the line on tax incentives so that the toll gate tax would rise to the level of 5% and companies face an effective tax rate of 9.5%.³⁴

In a widely circulated memorandum of November 1990, Dr. Stewart stated: "Tax exemptions are based on Puerto Rico's tax

³³ Junta de Planificacion, Informe Economico al Gobernador 1991, Table 25

³⁴ Stewart, John Puerto Rico's Economic Policy and Performance, undated

autonomy. Since tax autonomy is the most important economic aspect of Commonwealth status it is easy to understand why the present leadership has failed to face up to this issue. But if I am right, it is a reality that must be faced... Except for fanatic statehooders who appear to be willing to commit economic suicide for their ideology, no one wants to talk straight in public about the need to reduce dependence on local as well as federal tax exemptions. I suppose people think that talking about it will make it happen sooner and that we can fool people by keeping the issue off the table. We have the problem that our political leaders are mired in short run crises and are unwilling to develop and commit to quantifiable long run objectives. But a journey of a thousand miles begins with a single step."³⁵

In a private meeting in 1991 between top Fomento officers and private sector officers, one of Puerto Rico's most respected 936 corporation lawyers expressed how large profits by some corporations were making Puerto Rico's position in Washington difficult and suggested that something should be done. For Fomento this was a recommendation to break with its past; moreover, Fomento at the time was pressed to produce jobs by a government behind on the polls and could not have obtained the political backing to make any important change.

The new Washington administration of 1993 was bent on deficit reduction, committed to control health costs, and close to the labor movement. This created the conditions for changes in Section 936.

³⁵ Stewart, John Is Fomento Outmoded?, November 16, 1990, pg. 11

V Product

Fomento sells Puerto Rico to investors; however, it sells a different Puerto Rico to each industry group. Investments in apparel and simple electronics require low labor costs, pharmaceuticals require highly skilled labor and a favorable tax environment, and investments in heavy industry require cheap electricity. Puerto Rico fills the needs of some industry groups better than others. This is not unlike car companies. Nissan does not sell cars, it sells the Pathfinder in the 4x4 utility car segment, the Nissan 300ZX in the sports car segment, and nothing in the large pick-up truck segment.

The attractiveness of Fomento's product, Puerto Rico as an investment site for different industrial sectors, is discussed in the following section. Then, there is a discussion of the product's most important attribute, the tax incentives. The final section relates the efforts at improving the attractiveness of the product to the client.

Competitiveness of the Product

The major manufacturing industries in Puerto Rico are: apparel, food processing, electronics, and pharmaceuticals. Other sectors are small (e.g. jewelry) or provide inputs for the main sectors (e.g. aluminum cans). Medical devices could be considered part of either electronics or pharmaceuticals, depending on the product and its life cycle.

The competitive position of the apparel industry is declining, and this trend will continue in the future. NAFTA and the GATT will further reduce the protection level of the industry. In the case of 936 corporations like Sara Lee (Hanes and Playtex) and Maidenform, increasing wages are eroding profit margins and the "Made in USA" label does not command the premium prices it used to. In the case of local companies, many of them work on the basis of "cut, make, and trim", which makes them commodity producers. However, there are still some profitable niches where fashion plays an important role such as children clothing, women clothing, and ties.

In the food processing sector, the major companies are 936 corporations such as Coca Cola, Pepsico, Borden, Goya, and Star Kist. Local companies include Cervecería India and government-owned Lotus. A weak local agriculture sector and high shipping transportation costs limit growth in the industry. The tuna canning industry is facing strong pressure from low wage countries. Companies with products that bring a new marketing formula can be successful,

such as Campo Fresco (Caribik Sun passion fruit juice) and Yauco Selecto (gourmet coffee).

The electronics and computer industry in Puerto Rico presents a mixed picture. Minicomputer manufacturers such as Digital, Wang and Prime Computer closed; while Fomento was unable to attract a single major personal computer manufacturer. And because the Just-In-Time production system is important, each closure that reduces the number of suppliers/buyers in the sector diminishes the attractiveness of Fomento's product. However, this is not to say that Puerto Rico cannot compete in electronics and should give up on the industry. Intel chose to close down its Singapore plant and keep Puerto Rico open and Digital's 274,000 square-foot plant was purchased by Sensormatic, an electronics firm which was expanding its operation in Puerto Rico.

Meanwhile, some of Puerto Rico's competitors have performed extremely well. In the case of Singapore, it "is the disk-drive capital of the world, accounting for over 60% of global production, much of it on fully robotized lines developed in Singapore. The world's largest VCR factory (a joint venture between Thomson SA and Toshiba) is on the island, as is the largest compressor factory (Matsushita's, which recently produced its one hundred millionth compressor). Philip's Singapore tuner factory is that company's largest automated facility in the world. Apple Computer's flexible computer assembly lines in Singapore produce one computer every 20 seconds; the company finds it 40% to 50% cheaper to automate manufacturing in Singapore than in the United States."³⁶

By far the most dynamic manufacturing sector in Puerto Rico is the pharmaceutical industry. The number of employees grew from 1,686 in 1970 to 18,785 in 1990. Medical instruments, many of which products have characteristics similar to pharmaceuticals, grew in employment from 5,246 in 1970 to 14,798 in 1990³⁷. This is an impressive growth for an industry that is not labor intensive. Section 936 is perhaps the major factor propelling this growth. Nevertheless, Puerto Rico is achieving a critical mass in this industry which is by itself an incentive. Manufacturers of generics have started investing in Puerto Rico, which adds to the view of the improving competitive position of Puerto Rico in the industry.

³⁶ Sisodia, Rajendra "Singapore Invests in the Nation-Corporation" *Harvard Business Review*, May-June 1992, pg. 45

³⁷ Economic Development Administration, Area of Economic Research, March 1993

The list of pharmaceutical and medical devices companies established in Puerto Rico reads like a roll call of the global industry: Abbott, Ayerst-Wyeth, Boots, Bristol-Myers Squibb, DuPont-Merck Pharma, Eli Lilly, Hoffman-La Roche, Janssen, Lederle, etc. Many of the plants established in Puerto Rico have achieved high levels of quality. An example is Baxter, which provides annual quality awards to its manufacturing plants throughout the world. In 1991 three Puerto Rico plants were among the 10 awarded; and four were among the six finalists.³⁸

Baxter 1991 Quality Awards - Manufacturing Facilities

| | |
|--|----------------|
| Recipients | |
| Baxter S.A., Lessines | Belgium |
| Bentley Division, Añasco | Puerto Rico |
| I.V. Systems, Cleveland | Mississippi |
| I.V. Systems, Culebra | Puerto Rico |
| I.V. Systems-Drug Delivery, Round Lake | Illinois |
| I.V. Systems, North Cove | North Carolina |
| I.V. Systems-Technology Mfg., Round Lake | Illinois |
| Fenwal Division- Maricao | Puerto Rico |
| Renal Division, Mountain Home | Arkansas |
| Baxter Healthcare, Thetford | |
| Finalists | |
| Baxter Healthcare | Singapore |
| Baxter Healthcare, Castlebar/Swinford | Ireland |
| Fenwal Division, Añasco | Puerto Rico |
| I.V. Systems, Aibonito | Puerto Rico |
| I.V. Systems, Carolina | Puerto Rico |
| I.V. Systems, Jayuya | Puerto Rico |

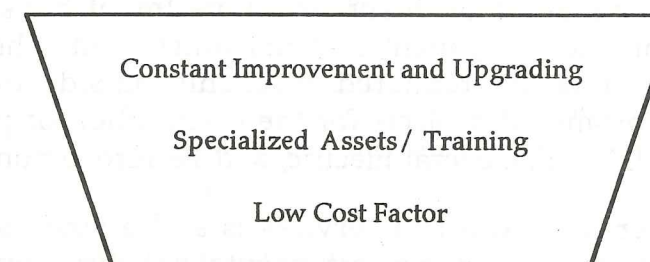
A major concern regarding the efforts of Fomento is that the growth of the manufacturing sector has come in a series of discontinuities, moving from one industry to another. Fomento has been very successful at attracting first apparel and shoe manufacturing investment, then petrochemicals, afterwards electronic companies, and now pharmaceuticals and medical devices manufacturing investment. But there has not been a substantial deepening of the business operations by the firms.

³⁸ As it would be expected with such a large industry, some of the companies have experienced problems. Warner Lambert production problems in 1992-93 led to shortages of product in the US market.

It is interesting to compare the Puerto Rico apparel sector with the experience of other jurisdictions such as New York, Switzerland, and Hong Kong. In the four jurisdictions the apparel industry has been declining or disappeared. In the case of New York, it has emerged as a fashion center, challenging the dominance of Europe. Switzerland has developed a strong industry of machinery for the apparel sector. Hong Kong has become a trading center for the apparel production of several Asian countries. Puerto Rico has not developed a single strong industry related to apparel.

One explanation may lie in that the competitive position of Puerto Rico has usually been a function of low factor costs, particularly labor, entrance to the US market, and taxes. In Michael Porter's hierarchy for sustaining advantage, this is the lowest echelon, under sustained investment in specialized assets/training, which is below constant improvement and upgrading.³⁹

Hierarchy for Sustaining Advantage



PRIDCO is supposed to provide part of the specialized infrastructure required by the industrial sector in Puerto Rico. During the 1950s it built general purpose buildings ahead of demand. This assured on-time delivery of the product, Puerto Rico, because investors would find buildings ready for occupation. During the 1990s PRIDCO still concentrates most of its efforts in constructing general purpose buildings. For a variety of reasons there has not been an attempt to provide specialized facilities like tele-ports, university laboratories, or industrial parks designed for a particular industry.

Fomento has no industry specialists like an expert on electronics or pharmaceuticals. In a business framework it means there are no product managers who track the performance and enhance the competitive position of the different products of the firm in the marketplace. Particularly for external promotions, Fomento's targeting

³⁹ Porter, Michael Op. Cit., pg. 49-52

of an industry takes the present competitive position as a given and not as a dynamic and malleable condition.

This could be a handicap in selling Puerto Rico, particularly to the extent that the product could be modified to meet the needs of the client. "In contrast to selling and marketing standardized goods which requires persuading many customers of the virtues of one particular product, taking orders for it, and thus meeting sales quotas, selling and marketing customized products requires having an intimate knowledge of a customer's business, where competitive advantage may lie, and how it can be achieved. The key is to identify new problems and possibilities to which the customized product might be applicable. The art of persuasion is replaced by the identification of opportunity".

40

One potential growth industry is the export of services⁴¹. Since 1978 Puerto Rico offers tax incentives to the export of services similar to the ones offered to manufacturing. The sector of export of services covered by Fomento's program includes professional services, trading companies, tele-marketing, insurance, investment banking, computer services, repairs to equipment and machines, and other activities in which the services are rendered to clients outside of Puerto Rico. Fomento has promoted projects for the distribution of products in the Caribbean by L'Oreal, General Electric, and Ferrero, among others.

However, the export of services is still a small segment of the Fomento program. According to Fomento statistics, export of services account for only 3,820 of the 148,453 jobs in Fomento promoted projects; and Fomento statistics for export of service companies overstate the number of jobs created because they often count jobs which are in fact for services to the local market. Other jurisdictions like Miami, Hong Kong, and Ireland have invested heavily in education and infrastructure in order to develop important service industries.

⁴⁰ Reich, Robert, Op. Cit., pg. 84

⁴¹ A small open economy imports most of what it consumes and therefore needs to export in order to pay for the imports. Services provided to the local market, while important, cannot be the spearhead of the economy because they do not provide the resources to import.

Software Development in Ireland Major International Companies

Ashton Tate
Boeing Computer
Digital Equipment
Dun & Bradstreet
Electronic Data Systems
Ericsson Expertise
General Electric Information Services
International Business Machines (IBM)
ICL
Lotus Development
Microsoft
Motorola
Nixdorf Computer Software
Philips NV (Silicon Software Systems)
Siemens
The Travelers Corp.
Westinghouse Canada

Source: Ireland's Industrial Development Authority, Some International Service Companies in Ireland

At one point, Fomento established a division whose main task was to promote the investment of service export companies, but did very little in terms of improving the product. In contrast, Ireland complemented its tax and financial incentives with educational programs and industrial parks specifically targeted to the service industry⁴². Tourism and air transportation for passengers in transit to other Caribbean locations, which at present are not part of Fomento's program, are two service exports at which Puerto Rico has been successful. The building of a hotel in the 1950's by Moscoso's Fomento, to be managed by the Hilton chain, gave birth to the tourism industry in Puerto Rico as it is known today and also to Hilton International. The incentives provided by Puerto Rico to the air transportation industry have been mainly a good geographical location and good airport infrastructure.

Singapore has made a strong effort to attract the Asian regional headquarters of multinational companies, usually cost centers. The idea is that headquarters export services in the areas of management

⁴²Ireland Industrial Development Authority, International Services and Dublin - The International Financial Services Centre, undated

and administration, and often also in the areas of finance, human resources, and marketing. Fomento's policy, emphasizing tax incentives, is not particularly suited to attract these types of investments. In this sense, Banco Popular, administering from Puerto Rico operations in the United States, Virgin Islands, and the Eastern Caribbean is one of Puerto Rico's most important exporter of services; it is not part of Fomento's program.

There is a consensus that more effort should be made to promote local investment. While external investment produced no net job increases in the period 1982-92, employment in local industry increased by 65%, albeit from a small base. One of the advantages of promoting local industry is that Puerto Rico automatically obtains not only the manufacturing component of the firm, but also management, finance, and marketing. Fomento recognizes the importance of local industry and, as discussed under the organization section, provides a more comprehensive set of incentives for local companies than for external companies (Design Council, Marketing and Fomexport Programs, larger cash grants, financing from the Economic Development Bank).

Nevertheless, it must be understood that if Fomento's product is unattractive to external investors, it probably is also unattractive to local investors. The local industry is particularly vulnerable because it is heavily concentrated in labor intensive manufacturing. In the case of apparel, accounting for over a third of the employment in the local industry, some of the industrialists have established operations in the Dominican Republic. An ominous sign is that one of the largest employers in the sector, Olympic Mills, is setting up a joint venture in the neighbor country. The president of Knitops, a firm with 160 workers, stated that so far he had no problem competing with low wage countries; however, when he does not have the capacity to fill an order, he subcontracts the sewing operation to either the Dominican Republic or Guatemala.⁴³ The late Puerto Rican fashion designer Mr. Fernando Pena developed a line of sportswear sold through the up-scale department store "González Padín"; it is manufactured in Korea.

Often, the more successful the company, the greater its flexibility to move operations out of their original home base. "The medium size city of Hamamatsu in Japan has produced several global companies: Yamaha, Honda, Suzuki, Kawai, and Hamamatsu Photonics. If the city does not support them, those companies will look

⁴³ Lanzar, Antonio "Knitops Sticks to Its Guns" *San Juan Star*, Feb. 1, 1993, pg. B11

elsewhere."⁴⁴ Two major Swedish firms, Novel and Tetrapak, changed their headquarter operations to Switzerland.

Who owns the corporation is much less important now than it used to be. In a case that shows some of the realities of today's international trade, the US Department of Commerce determined that the American company Smith Corona was dumping the US market with typewriters manufactured in Singapore to the detriment of the Japanese company Brother which manufactures in Tennessee.⁴⁵ "Nations can no longer substantially enhance the wealth of their citizens by subsidizing, protecting, or otherwise increasing the profitability of 'their' corporations."⁴⁶ Countries must be competitive, regardless of who owns the business operation.

Taxation Issues

Puerto Rico's key competitive advantage is a tax law, Section 936, that can be changed unilaterally by the US Government and that will most probably be eliminated in case Puerto Rico becomes a state of the US. This brings a consideration of political instability to any investment decision that takes into account the benefits of Section 936. Recent changes in the Washington administration will alter the rules of the game under which many companies made the decision to invest in Puerto Rico.

Actions to increase the stability of this law have the result of improving Fomento's product. The most significant effort in this area was the use of 936 Funds for loans in the Caribbean. In order to reduce their toll gate tax rate companies must deposit part of their profits in Puerto Rico financial institutions or buy financial instruments at below market rates. Mr. Antonio J. Colorado led the effort to give access to these funds to Caribbean countries. The idea was to use Section 936 to benefit Caribbean countries and advance the geopolitical objectives of the United States. At Congressional hearings in March 1993, one of the testimonies in favor of Section 936 came from the Jamaican ambassador to Washington, Mr. Richard Bernal.⁴⁷

Higher taxes in Puerto Rico could have had a positive impact when defending Section 936 in the US Congress. The cost to the US Treasury per direct manufacturing job in Puerto Rico, as calculated by

⁴⁴ Ohmae, Keinichi Op. Cit., pg. 195

⁴⁵ "Acusada Smith-Corona" *Nuevo Dia*, Feb. 4, 1993, pg. 104

⁴⁶ Reich, Robert, Op. Cit., pg. 153

⁴⁷ Friedman, Robert "House Committee Hears Pros, Cons on 936", *San Juan Star*, April 2, 1993, pg. 6

the Treasury, was a constant issue when discussing Section 936 in Congress. To the extent that taxes had been higher in Puerto Rico, a few companies whose main purpose of coming to Puerto Rico was the search for a tax haven would have chosen another location. Assuming that in the case of higher taxes Coca Cola and Pepsico would not have established facilities in Puerto Rico while there was no impact on any other food processing firm, the cost per job in the food processing sector as calculated by the US Treasury drops from \$22,669 to \$6,429.

Food Processing Industry, 1989
US Treasury Estimates of the Cost of Section 936

| | Number of Employees | Estimated Tax Savings | Est. Tax Savings Per Employee |
|--|---------------------|-----------------------|-------------------------------|
| All 936 Corporations | 11,828 | \$268.1 mill. | \$22,669 |
| Coca Cola and Pepsico | 500 | \$195.3 mill. | \$390,600 |
| All Companies Except Coca Cola and Pepsico | 11,328 | \$72.8 mill. | \$6,429 |

Source: US Treasury, Impact of Clinton's Proposed "Wage Credit Plan", March 29, 1993

In addition, the companies that would have remained in Puerto Rico would have paid more taxes to Hacienda. The estimate of income forgone by the US Treasury takes into account a tax credit for contributions to the government of Puerto Rico. Therefore, the estimate of income forgone would have been even lower than \$6,429.

One interesting option available to Fomento was to apply price discrimination. In the same way that airlines structure their fares so that businessmen pay higher prices, or the way in which Jamaica taxes differently an apparel company in the foreign trade zone from a bauxite mining company, Puerto Rico could have established higher tax levels for some sectors, while maintaining lower taxes for the sectors in which Puerto Rico was not very competitive or had particular interest in promoting.

It seems that Singapore has an aggressive policy of price discrimination in order to advance what they consider strategic areas. Glaxo is the only major British pharmaceutical company with no manufacturing investment in Puerto Rico (Smith-Klein-Beecham, BOC Group, and ICI all have). The company had a plant in Singapore, lured in part by the double taxation agreement between Singapore and the United Kingdom. Fomento made a major effort to attract Glaxo to Puerto Rico, including visits to the company headquarters. Singapore, at the risk of losing an expansion to Puerto Rico, required from Glaxo

involvement in research and development as a quid pro quo for its tax incentives. In 1991 Glaxo chose to expand in Singapore.

In Michael Porter's diamond of national competitiveness, Singapore is trying to improve its competitive position by depending less on factor cost advantages (low taxes) while developing related and supporting industries. Parallel to this, the Singapore government is investing in education and laboratories to improve the availability of factors specialized for this industry.⁴⁸

The policy of tax discrimination by industry segment has a precedent in Puerto Rico in the proposal of the Plan Chardón of 1934 to give different tax and other incentives tied to the sector's wage bill (see Appendix on Industrial Policy). On a larger scale, it is the policy of the government of Puerto Rico to require lower taxes from manufacturing and the export of services than from other parts of the economy.

The higher taxes would reduce the return on equity of the project for the private company. However, these taxes could be used to create value for the customer by improving infrastructure like the water treatment plants or developing educational programs targeted to areas like biotechnology or computer programming in which Puerto Rico could develop a strong industry. Although companies would not have enjoyed the somewhat higher taxes, they would have appreciated an improvement of their return due to an enhanced Puerto Rico as a production site while a more stable Section 936 would have reduced the risk of the investment, lowering the required rate of return⁴⁹.

It must be kept in mind that companies are indifferent as to whom they pay taxes to, the Federal Government or Puerto Rico; their concern is the bottom line. A tax increase reduces the competitiveness of Puerto Rico which could be partially or completely offset by the benefit of larger revenues collected by "Hacienda". The same trade-off does not hold if the taxes are collected by the US Treasury as a result of amendments to Section 936.

Of course, tax increases must be treated like a price increase of any product, enough to improve margins but not so much that affects sales or the customer base. A consulting report by Plant Location International prepared for Fomento in 1991 compared the attractiveness of six locations (Puerto Rico, Singapore, Ireland, Mexico, North Carolina, New York) with respect to 19 business operations. The conclusions were that although Puerto Rico was the first or second

⁴⁸ Porter, Michael Op. Cit., pg. 69-130

⁴⁹ Sharpe, Lintner - Capital Asset Pricing Model

choice in 5 out of the 19 cases, tax rates at US levels would make Puerto Rico an unattractive location in all five cases.

Fomento's Efforts at Enhancing Its Product

In good companies there is a strong interaction between marketing, which is close to the consumer, and research & development, which designs and improves the product. This is not the case with Fomento and Puerto Rico. One problem is that in Puerto Rico there is no Secretary of the Economy in charge of the product and Fomento did not have the clout to reverse many of the negative trends in its products. Other problems like high electricity costs, salary scales somewhat out of line with productivity, and problems with the water treatment infrastructure have already been mentioned (see section on Pricing).

Red tape is burdensome. To establish a plant a large number of permits are required. This involves going from one agency to the other submitting applications and spending time. Permits for aquaculture, which falls within Fomento's area of activity, could easily take two years. Fomento sponsored a project for a coal-fired electricity plant, Cogentrix-Endesa. It is reasonable that if environmental safety is not assured, a negative answer should be given; it is unreasonable that more than three years after the process started, the company is still waiting for replies on some of the applications. An old Fomento hand compared the present situation with the 1950s: "Back in my time we begged industries to come to Puerto Rico. Today industries have to get on their knees and beg the government bureaucrats to allow them to operate here."⁵⁰

These problems are within the power of the Government of Puerto Rico to either solve or substantially alleviate. Fomento's leverage is limited. An attempt at privatization was made in 1990. Fomento's input was marginal. The process was handled by the Government Development Bank. Since the purpose of the sale was to raise \$2 billion, the decision was made to sell the Puerto Rico Telephone Company. It is probable that Fomento would have had a different view of what was important to privatize in order to improve its product.

Other issues are under the control of the Federal government. For example, Puerto Rico Federal Relations Act restricts maritime transportation between Puerto Rico and the United States as discussed in the pricing section. Changes in this area would have to be

⁵⁰ Maldonado, Alex "Fomento's New Chief" San Juan Star, Dec. 31, 1992, pg. 40

negotiated with the US Congress. Theoretically, Fomento could offer concessions in Section 936 in exchange for amendments to this situation. There are two problems. One is that moving out of the maritime restrictions could be viewed as a step out of the US political system, creating opposition to the measure in Puerto Rico. The second is the concern that Congress could take the concession on Section 936 and not deliver on the maritime restrictions, particularly when lobbied by the US groups that benefit from the application of the present legislation.

But Fomento is no small government department at the bottom of the central government's priority list. There is no doubt that part of the problem with Fomento's product is that too much management time was spent on promotion and defending Section 936 and not enough was spent on improving the product. Four examples are the Research Fund, specialized infrastructure, the Spain-U.S. double taxation agreement, and coordination with the education establishment.

Given Puerto Rico's manufacturing base, there is great potential for research and development. Some is performed. Squibb inaugurated in 1988 a facility which employs 22 scientists and technicians, eight of them with doctorates, and seventy percent of whom were beneficiaries of the Fomento's Scholarship Program.⁵¹ The local firm Vasallo is well known for its patents related to PVC pipes.

The Tax Incentives Act of 1987 established a tax of 0.075% of sales, never to exceed 0.5% of net industrial development income, to go into a Special Fund. Two thirds of the fund was to be used for scientific and technical research. In order to use the Fund, regulations had to be drafted by Fomento. It was not until five years after the enactment of the tax that regulations were finally prepared, wisely using as the model the Induniv partnership organized independently by the private sector and the University of Puerto Rico. Meanwhile, Singapore is surging ahead as a research center for Hewlett-Packard in laser printers and for Apple in video screens.⁵²

Some jurisdictions are developing physical infrastructure close to university centers and targeted to research and high-tech companies like Triangle Park (North Carolina) and Hsin-Chu (Taiwan). "In Korea, for example, the government has established a special industrial

⁵¹ Riefkohl, William Presentation to the Eastern Pharmaceutical Technology Meeting, November 1990

⁵² Reich, Robert Op. Cit., pg. 124-5

region in the Kumi area for electronics-related companies. By providing specialized infrastructure and technical centers, the hope is to attract a variety of companies whose geographic location is self-reinforcing"⁵³. Fomento has not been involved in a similar effort.

In the case of water treatment plants, the shortcomings of the Acqueducts and Sewers Authority could have been compensated somewhat by an aggressive PRIDCO. It could have built water treatment plants for industrial use, contract a private sector company to operate each plant, and charge the industrial companies for its use. These water treatment plants could have been part of the infrastructure provided by PRIDCO in new industrial parks, perhaps targeted to pharmaceuticals.

The Spain-U.S. Double Taxation Agreement was agreed in 1990. Section 3 of the Protocol to the treaty reads: "The parties agreed to initiate, as soon as possible, the negotiation of a Protocol to extend the application of this convention to Puerto Rico, taking into account the special features of the taxes applied by Puerto Rico."⁵⁴ This was an excellent opportunity to draft a sort of tax sparing agreement or Section 936 like provision. Large investments in the financial sector by Spanish banks provided a strong business constituency for the protocol. And the protocol would have set an important precedent for other similar treaties that would have enhanced the attractiveness of Puerto Rico for non-U.S. investors.

A meeting was held in Madrid in 1991 with officers from the governments of Spain and Puerto Rico. Fomento sent no representative. Little follow up was given to this initiative. At the time of this writing, there is no Puerto Rico/Spain protocol to the U.S.-Spain Agreement.

Fomento promoted plants are the main source of employment for students coming out of many of the high schools and universities of Puerto Rico's educational system. There is very little coordination between Fomento and the educational system in order to assure that the system meets the needs of the industrial community. A reform of the school system received basically no Fomento input. Some progress has been made since Fomento conditioned some tax exemptions to the adoption of schools by the benefiting companies. Much more needs to be done. Fomento runs a scholarship program established under the leadership of Moscoso, mainly for technical degrees in the United

⁵³ Porter, Michael, Op. Cit., pg. 655

⁵⁴ Convention Between the United States of America and the Kingdom of Spain, Protocol, 1990

States. Again, there is little coordination between Fomento and the University of Puerto Rico.

Recently, Fomento decided to target biotechnology companies. The Targeting Area prepared a hit list of companies for the promoters. Companies were approached, including subsidiaries of companies already established in Puerto Rico. Some important successes were scored, like the investments of Ortho Biologics (subsidiary of Johnson & Johnson) and Amgen. At no point did Fomento officials meet with officers from the University of Puerto Rico to develop programs specifically targeted to the biotechnology industry.

Fomento has performed some improvements in its product. Fomexport was started in 1990 to promote Puerto Rican products overseas. This was an extension of the locally focused Marketing Area. The function was not being performed effectively by the Commerce Department and Fomento had to lobby the central government in order to bring it under its fold. Some successes have been achieved with the export of processed food products to Europe, construction materials to Central America, and apparel goods to the United States.

The Enterprise Development Initiative (EDI) developed in 1992 provided extensive tax benefits to local investors who buy shares in young high-tech companies. Tax incentives are not a major consideration for these companies while the availability of venture capital is critical. The first project of EDI, Inner-Space Medical Capital turned out to be controversial when the tax incentives cost Hacienda \$3.5 million the first year, the company will do all its research in California, and if the research is successful then it would manufacture part of the production in Puerto Rico.⁵⁵ Although some adjustments are necessary, the thrust of EDI could allow Puerto Rico to attract some emerging technologies.

The "Fast Track" is a program to expedite the permitting process for key Fomento projects. While it did not solve Puerto Rico's handicap of too much bureaucracy in the central government, it alleviated the problem for the projects that were most important to Fomento.

However, increasing global competition demands more comprehensive efforts. For some time Fomento has concentrated on what Kenichi Ohmae calls doing more better. If we are sophisticated and persuasive enough in our promotion efforts, the firm will choose

⁵⁵ Cintrón, Hiram "Inner Space Deal Irks Bankers" Caribbean Business, March 11, 1993, pg. 4

Puerto Rico over Singapore, Ireland, North Carolina, or Mexico. "All eight men in the boat bend over a little farther, pull a little harder, work a little better as a team."⁵⁶ But given our competition, doing more better is not enough. We must offer the best value for the customer. "Unless Puerto Rico undertakes fundamental structural reforms, its future rate of economic development will at best be mediocre compared to other middle income countries."⁵⁷

⁵⁶ Ohmae, Keinichi, Op. Cit., pg. 51

⁵⁷ Stewart, John, Is Fomento Outmoded?, Nov. 16, 1990, pg.8

Conclusion

We have analyzed the industrial policy of Puerto Rico. Fomento, leading this policy, sees itself as a company selling Puerto Rico. Using a business framework of analysis we have seen the strengths and weaknesses of Fomento.

Like any good business organization, its successes outnumber its failures. Excellence at promotion created jobs for hundreds of thousands of Puerto Ricans. However, missed opportunities in pricing and product development have diminished the attractiveness of the product.

Puerto Rico's petrochemical industry was based on a legal mechanism that allowed companies to import oil into Puerto Rico at a lower cost than into the United States. When in 1974 the price of foreign oil went up, the regulations were eliminated and the industry collapsed. Today, Puerto Rico's key competitive advantage is the legal mechanism Section 936.

Like Mexico with oil, Puerto Rico should have used the wealth of Section 936 to build a strong industrial and export services sector, which were not dependent on Section 936 for survival. According to Mr. Natale Ricciardi, president of Pfizer-Puerto Rico, now it is cheaper for Pfizer to operate a plant in Brooklyn than the one in Puerto Rico⁵⁸.

Mexico performed structural reforms after the price of oil had fallen. To maintain a viable industrial structure, Puerto Rico could be forced to do the same. If Section 936 is significantly altered, the structural changes will be more painful than they needed to be.

Independently of the future of Section 936, and even more so if there is a major change to the tax section, Fomento needs to reassess its position. It is not the first time that this happens. Operation Bootstrap in the late 1940's is a reassessment of the conditions at the time, so is the push for petrochemicals in the 1960's, and for high-tech in the late 1970s.

Fomento has a large industrial base from where to move forward. It can count on a large pool of skilled labor and an excellent engineering university. It can offer an infrastructure that, while falling behind countries like Singapore, is still significantly better than what other competitors offer. And it has a strong organization with a proud history.

⁵⁸ "Pharmaceuticals Play Waiting Game" San Juan Star, March 21, 1993, pg. 32

"The critical issue is the mind-set of managers, their willingness to look at their business and their customers' needs with continually fresh eyes. More than their willingness, their insistence. It is human nature to resist change, to stick with what you've got, to do more better of what you know how to do well. But that only makes it more important for managers consciously to refuse to take their business systems or their definitions of customer value as givens. It is their responsibility to rethink those business systems on a regular basis, to take them apart in their minds, to go through a disciplined mental process of decomposing them and then restructuring them from scratch, from a zero-based foundation."⁵⁹

Puerto Rico does not deserve less.

⁵⁹ Ohmae, Keinichi, *Op. Cit.*, pg. 57

Appendix Economic Basis for an Industrial Policy

Throughout this work there is an implicit assumption that it is positive for the government of Puerto Rico to have an active industrial policy. In this section I would like to make explicit this assumption. By industrial policy we mean government interventions that promote the development of one sector of the economy, one industry, or even one company, by significantly altering the outcome of investment/production decisions away from what equal treatment of all sectors and the free market would have determined.

Hong Kong is a notable example of an economy that relies on the market to allocate investment and the result of the last forty years is extremely positive. Countries like India and Brazil have tried industrial policies that have failed miserably. On the other hand, countries like Singapore, Korea, and Japan engaged in aggressive industrial policies with extremely positive results. Countries like Germany and France also had interventionist industrial policies and relatively healthy economic results.

The fact that one country experiences solid economic growth does not mean that the industrial policy was successful. For this it is required that the resources dedicated to supporting the strategic sector could not have produced a better result if market forces would have allocated them elsewhere.⁶⁰

Mainstream economic theory states that the market forces will tend to allocate investment according to its most productive use. The most effective way for governments to promote development is to intervene only to correct market imperfections such as natural monopolies (electricity), positive externalities (education) and negative externalities (pollution). When an investment has important positive externalities, like worker's training or improving the competitiveness of other operations, it is in the interest of the country to offer incentives to lure the corporation. But bidding by different jurisdictions could wipe out the benefits of the externalities, leaving the winner of the bidding worse off than without the investment.

It has been argued that in spite of its undoubted success, Singapore would have performed even better if it had followed the free market policies of Hong Kong. And that the most successful sectors of the French economy (tourism, wines, luxury goods) are not the ones

⁶⁰ Krugman, Obstfeld *International Economics*, Harper Collins 1991, pg. 276-77

that have been the subject of most support and government subsidies (electronics, aircraft manufacturing). On the other hand, all major industrial countries developed their manufacturing base behind protectionist walls. Hong Kong could be a special case due to its size and particular relationship with China; and there is only one China in the world. The jury on industrial policy is still out.

Puerto Rico's modern history of industrial policy is born with the Chardón Plan of 1934. "In the broadest sense, what the Chardón Plan urged was the building of industry around labor, which was plentiful, and an emphasis on developing products related to sugar and other agricultural crops, which could broaden and deepen the local industrial base. Protective tariffs were recommended for these infant industries, though they were to be phased out after an initial period or, if the tariffs were retained, the firms so protected were to be regulated as public utilities. Besides initial tariff protection, tax credits were to be offered to attract industry, the amount of the credits to depend upon the company's labor bill; that is, upon its specific and direct contribution of employment and on the nature of the industry".⁶¹

During the 1940's and 1950's Fomento and Teodoro Moscoso led Puerto Rico towards two industrial policies that shaped the country. One was tax exemption for strategic sectors of the economy and the other was provision of fixed assets by the government to be used/operated by the private sector. Manufacturing companies were offered tax holidays, zero taxes, if they established operations in Puerto Rico. And the government invested in industrial buildings that were ready for occupancy at rates that often carried an implicit subsidy. Also, the government built a major hotel and leased it to the Hilton chain.

Almost half a century later, Moscoso's policies are still the conventional wisdom on how to promote the development of the Island. The policy of the new Roselló administration is to increase taxes on exempt corporations to 10.5%, still far from the regular corporate tax rate of 42%. The administration plans to privatize the government-owned hotels, but also to take significant minority equity positions on new developments. As a way of comparison, such policies would be outside the political mainstream of the two major US political parties.

It is beyond the scope of this work to analyze what would have been the economic results if the invisible hand of the market had been allowed to lead the country. We will discuss if at least in theory it is

⁶¹ Dietz, James Economic History of Puerto Rico, Princeton University Press 1986 pg. 151

reasonable to expect government intervention to produce better results for Puerto Rico than the free market.

We can make a strong case about market imperfections in the Puerto Rico labor market due to two elements: minimum wage and welfare benefits. If wages do not reflect the marginal cost of labor, then the private cost of labor is higher than the social cost of labor and government intervention could have a positive effect.

The Federal minimum wage is probably a minor market imperfection in the United States, but not in Puerto Rico. In 1990 the Federal minimum wage represented 38% of the average wage in the United States, as opposed to 64% of the average wage in Puerto Rico.⁶² The high minimum wage forced the whole wage structure of the country upwards and increased the number of Puerto Ricans priced out of the labor market⁶³. Economic theory would direct government intervention towards reducing the Puerto Rico minimum wage. This is not a realistic political option, Puerto Rico minimum wage must be set equal to the US one. Puerto Rico has implemented some workfare and labor subsidies programs, but these have been limited and administrative costs have been high.

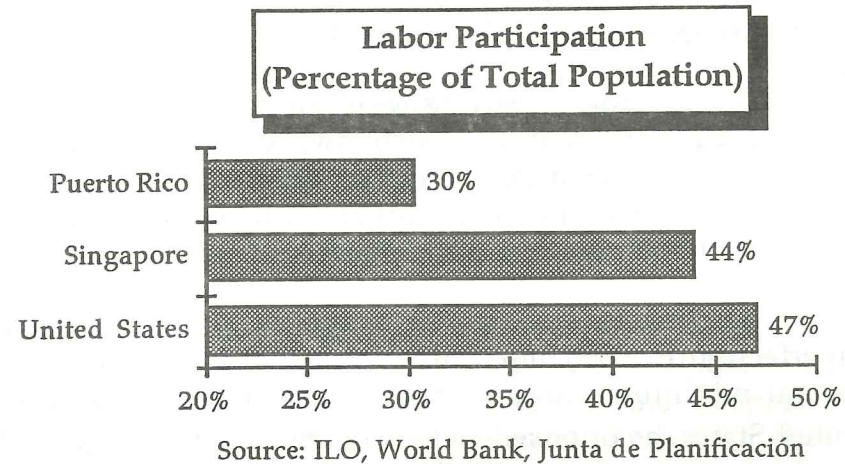
Welfare benefits for Puerto Ricans are very significant. Government transfers to individuals represent 29% of personal income; the Federal Food Stamps Program alone, which is capped below the levels offered in the US, represents 4.3%, compared to less than 0.5% in the United States.⁶⁴ Economic theory would direct government intervention towards reducing or reforming the transfers to individuals. Political reality leads to efforts to increase the transfers to individuals even more, particularly from the Federal government since it has no cost to the local government.

Major imperfections in the labor market would be reflected in consistent low labor participation levels and high unemployment. This is exactly the experience of Puerto Rico. Labor force participation is low by international standards. Average unemployment for a year has never been recorded at less than 10% of the labor force and perhaps there is a higher natural rate of unemployment after the initiation of the foodstamp program in the mid-1970s and the application of the Federal minimum wage in the early 1980s.

⁶² International Labor Organization, 1991 Report

⁶³ Freeman, Richard "Labor Market Institutions and Policies", in Proceedings of the World Bank Annual Conference on Development Economics - 1992, The World Bank 1993, pg. 127

⁶⁴ Junta de Planificación, Informe al Gobernador 1991, Tables 15, 21



Therefore, it is reasonable to assume that the cost of labor to the private sector is higher than the cost of labor to society. The government can intervene across the whole economy or target its efforts to the sectors where its impact is highest.

According to the Puerto Rico Planning Board each job in manufacturing creates 1.12 jobs indirect jobs, while each job in services creates only 0.42 indirect jobs.⁶⁵ Not a surprising result since many service jobs in Puerto Rico, particularly the ones in commerce, have a very high imported goods component. Tourism is probably an exception within the service group and should have a strong multiplier effect.

⁶⁵ Junta de Planificación *Multiplicadores Industriales de Puerto Rico*, October 1990, pg. 23

Although not exactly a market imperfection, there is the issue of Puerto Rico being a region of the United States economy. A Puerto Rico trade deficit does not have to be matched by purchases of goods and services in Puerto Rico by foreigners since our currency is the US dollar. As if Puerto Rico was on the gold standard, there is no opportunity for a devaluation. The adjustment should come from a contraction in the salary levels in Puerto Rico. However, since there is free movement of labor between Puerto Rico and the United States, the adjustment will probably come through emigration. This result could be efficient from a purely economic perspective, but negative from a national point of view. Therefore, it could be beneficial to promote the economic activities that either export or substitute imports. Fomento's program is targeted to manufacturing and the export of services.

Externalities are difficult to measure. It is generally accepted that Puerto Rico has achieved an increasingly sophisticated labor force. Part of the explanation must lie in the existence of manufacturing operations brought to Puerto Rico through the industrial incentives program.

The other externality lies in the economies of agglomeration achieved by some industries. When some industries achieve a certain threshold, many specialized services become available which makes the industry as a whole more competitive. A company like Unipro, industrial engineers, architects, and planners, provides sophisticated services, particularly to pharmaceutical companies. It now exports services to Portugal because there was a large demand for its services in the Puerto Rican market in the first place.

Another market imperfection is the mobility of investments with high profit margins of multinational companies. Profits are shared by stockholders (dividends) and governments (income taxes). *Ceteris paribus*, companies will try to channel their investments to low taxation jurisdictions. Many companies achieve profits over and above what would be expected in an environment that economists call perfect competition. For these companies, tax issues are particularly important. The regulations of the Internal Revenue Service and legislation like the Alternative Minimum Tax limit the mobility of the investments of US corporations. It would be positive for Puerto Rico if it is able to tax some of these profits. The benefit would be significant in the case of companies with high profits due to either patents or strong brand names.

Preliminary information for 1989 shows that companies enjoying the tax incentives available through Fomento's program contributed with 46% of total corporate income. The Roselló

administration is considering modifications in the industrial incentives program to increase government revenues by approximately \$200 million.

If companies tend to allocate their investments taking into account tax considerations, we would expect that the profit margins and returns on equity in Puerto Rico are higher than in the United States. And indeed, this is what we observe. Return on equity by pharmaceuticals in Puerto Rico is not very different than in the United States. One possible explanation is that a major part of the assets of pharmaceutical corporations in Puerto Rico is in the form of financial instruments which pull down the average return on equity.

Profit/ Sales Ratios, 1985

| Industry | Puerto Rico | United States |
|-------------------------|-------------|---------------|
| Pharmaceuticals | 59.7% | 16.0% |
| Instruments | 49.1% | 6.6% |
| Personal Care | 25.3% | 5.4% |
| Apparel | 17.8% | 3.6% |
| Electronics/ Electrical | 40.0% | 5.4% |

Source: Fomento's Highlights of Industries, 1990

Profit/ Equity Ratios, 1985

| Industry | Puerto Rico | United States |
|-------------------------|-------------|---------------|
| Pharmaceuticals | 28.1% | 24.0% |
| Instruments | 44.1% | 11.2% |
| Personal Care | 15.6% | 23.7% |
| Apparel | 19.0% | 20.3% |
| Electronics/ Electrical | 33.5% | 13.7% |

Source: Fomento's Highlights of Industries, 1990

The elasticity of demand for the product Puerto Rico is probably high if we measure it in terms of tax rates due to the many alternative production sites available to companies. Industrial investment is very mobile, particularly if the purpose of the investment is to supply the relatively open US market. If we examine the industrial incentives program we realize that tax exemption is by far the most important incentive. Others such as low rent and employment cash grants could be important for small local entrepreneurs, but will not convince a major multinational with wide flexibility in terms of where to invest.

For example, PRIDCO rents some 21.5 million square feet⁶⁶ at below market rates. Even if these were \$5 below market price it would represent a subsidy of approximately \$107.5 million. According to the US Treasury, the reduction in US tax liability due to the US possessions tax credit amounted to \$2.45 billion.⁶⁷

In a sense, when the government offers a 6% to 7% effective tax rate to companies it is not giving anything away, since if it offered no tax concession it would attract little industrial investment and end up collecting few tax dollars. This contrasts with the cash grants ranging from 25% to 60% of the cost of the project offered by the Republic of Ireland.⁶⁸ If the project turns sour, like in the case of the DeLorean automobile plant, the loss to the society of Ireland could be substantial.

Given the opportunities for transfer of technology and options for the mobility of international investments, the industrial policy of Puerto Rico could provide the benefits of increased employment and positive externalities, while at the same time acting as a source of revenue for the government.

Thus, we can make a case for industrial policy in Puerto Rico with strong economic foundations. It could be the subject of another work to provide a more in-depth analysis of these market imperfections and confirm the hypothesis that industrial policy had a significant positive effect on Puerto Rico.

⁶⁶ Puerto Rico Industrial Development Company, Op. Cit., pg. 27

⁶⁷ Department of Treasury Summaries of the Administration's Revenue Proposals, February 1993

⁶⁸ Marino, John "What the Competition is Offering" San Juan Star, March 8, 1993, pg.B-7

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